

APHIDIDÆ OF CEYLON.

By P. VAN DER GOOT. (Salatiga, Java.)

(With two Illustrations.)

UP to the present time but little has been recorded about the *Aphididæ* which occur in Ceylon. The most important Ceylon publication on this interesting group of insects is a paper by Mr. H. Schouteden, of Brussels, entitled "Notes on Ceylonese Aphides" ("Spolia Zeylanica," Vol. II., Part VIII., 1905, pages 181-189). This paper gives us a fairly good description of four Ceylonese plant lice, namely, *Greenidea artocarpi*, Westw., *Lachnus greeni*, Schout., *Oregma bambusæ*, Buckt., and *Ceratopemphigus zehntneri*, Schout.

Since then little or no further systematic work has been done on this group of insects in Ceylon. In the course of 1913 and 1914 a number of *Aphididæ*, collected by the late Mr. A. Rutherford, the Government Entomologist of Ceylon, were submitted to me for determination. Most of them were either well-known species, or had already been previously collected by me in Java; two of them appeared to be new to science. A list of the plant lice in this collection may, perhaps, be of some value in increasing our knowledge of Ceylonese insects; with the kind permission of Mr. Rutherford I therefore give a list of the plant lice observed, together with a description of the two new species.

List of Ceylon Aphididæ, collected by Mr. Rutherford.

<i>Macrosiphum, minutum</i> , nov. sp.	<i>Longiunguis spathodeæ</i> , v.d.G.
<i>Macrosiphum rosæ</i> , L.	<i>Brachycaudus helichrysi</i> , Kalt.
<i>Micromyzus nigrum</i> , v.d.G.	<i>Greenidea artocarpi</i> , Westw.
<i>Toxoptera aurantii</i> , Boyer.	<i>Greenideoida ceyloniæ</i> , nov. sp.
<i>Toxoptera minuta</i> , v.d.G.	<i>Shivaphis celti</i> , Das.
<i>Aphis gossypii</i> , Glov.	<i>Oregma insularis</i> , v.d.G.
<i>Aphis tavaresi</i> , Del Guercio.	<i>Oregma minuta</i> , v.d.G.
<i>Aphis medicaginis</i> , Koch.	<i>Cerataphis lataneæ</i> , Boisd.

Notes on the above-mentioned Aphididæ.

Macrosiphum minutum, nov. sp.—

Apterous viviparous female.—Examples of some measurements :—

Length of body ..	2·34 mm.	Length of siphunculi	0·63 mm.
Breadth of body ..	1·17 mm.	Length of cauda ..	0·45 mm.
Length of antennæ ..	—		

Colour.—Body brownish. Eyes black. Antennæ yellowish-brown, darker towards the tip. Legs yellowish-white; the tarsi, the tip of the tibiæ, and the greater part of the femora blackish. Cornicles and cauda black. (Notes from specimen preserved in alcohol.)

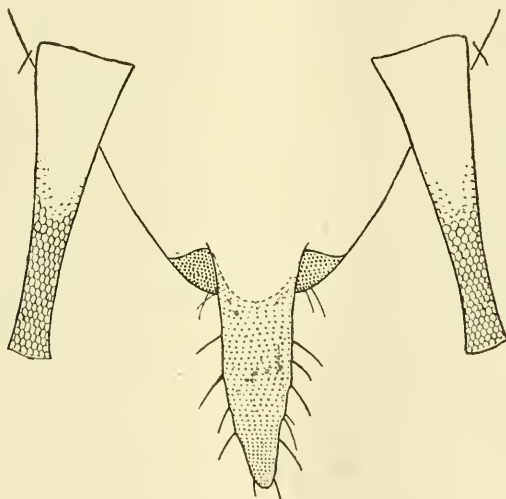


FIG. 1.—*Macrosiphum minutum*, n. sp.

HINDER PART OF ABDOMEN OF WINGLESS FEMALE (UPPER SIDE).

Morphological Characters.—Body ovate, the dorsum with transverse rows of spiny hairs, which do not arise from tubercles; the hairs are mostly slightly knobbed at the apex.

Antennæ partially broken off in all specimens examined, with a few stout spines. The third antennal joint bears only a single sensorium near its base. Frontal tubercles strongly developed.

Rostrum reaching to the third coxæ.

Siphunculi fairly long and thin, their basal half distinctly enlarged; the top part of the cornicles is finely reticulate. Cauda ensiform, about quarter shorter than the cornicles.

Legs long and slender, with scattered short spines.

Life History.—This small *Macrosiphum* was captured by Mr. Rutherford in May, 1914, living on *Vernonia cinerea*. Only a few wingless specimens could be discovered at that time.

Locality.—Peradeniya.

Macrosiphum rosæ, L.—Collected on roses, only wingless specimens present.

Locality.—Peradeniya.

Mycromyzus nigrum, v.d.G.*—A few winged and wingless individuals of this small species were collected by Mr. Rutherford on ferns (17-11-13); some months later (11-7-14) a single-winged female was observed on cinnamon (*Cinnamomum*, sp.). In Java only ferns have been observed as host plants.

Locality.—Peradeniya.

Toxoptera aurantii, Boyer.—The author's recent observations on this species have proved that *Toxoptera aurantii* has a very wide range of food plants. In Ceylon it has been collected by Mr. Rutherford on the following host plants: *Celtis cinnamomea* (on flowers), *Cynometra cauliflora* (on inflorescences), *Eugenia mooniana* (on apex of twigs), *Flacourtia ramontchi* (on young shoots), *Mesuaferrea* (on young twigs), and on *Plumbago capensis*. On *Mesua* the colonies were attended by the well-known ant *Ecophylla smaragdina*.

Locality.—Peradeniya.

Toxoptera minuta, v.d.G.—A single specimen was captured on the wing. In Java the author has observed a *Cyperacæ* (*Fimbrystilis diphylla*) as a food-plant of this species.

Locality.—Peradeniya.

Aphis gossypii, Glov.—This widely spread and polyphagous species has been collected by Mr. Rutherford on *Aristolochia indica*, on an Euphorbiaceous weed, and on *Solanum torrum*. On the latter food-plant the colonies were attended by the red

* This and following species, bearing the author's name, are described in full in his recent publication on Javanese plant lice (Zur Kenntnis der Blattläuse Java's. Contributions à la faune des Indes néerlandaises. Vol. I., fasc. iii., 1915).

ant *Ecophylla smaragdina* ; though the infestation was heavy, only a single *Syrphid* larva was observed.

Locality.—Peradeniya.

Aphis tavaresi, Del Guercio.—Observed on *Citrus*, sp. only wingless specimens collected.

Locality.—Peradeniya.

Aphis medicaginis, Koch.—Collected on *Crotalaria striata* ; the colonies consisted chiefly of wingless individuals.

Locality.—Peradeniya.

Longiunguis spathodeæ, v.d.G.—A number of wingless and winged females of this species were collected by Mr. Rutherford on the shoots of *Panax*, sp. The colonies were exterminated by *Syrphid* larvæ and by an *Aphidius*, sp. This same species has been collected by the author in Java on *Gardenia florida*, *Senecio tenuifolia*, and *Spathodea diepenhorsti*.

Locality.—Peradeniya.

Brachycaudus helichrysi, Kalt.—A few wingless specimens were collected by Mr. Rutherford on *Memecylon* glover [*? Memecylon*.—Ed.].

Locality.—Peradeniya.

Greenidea artocarpi, Westw.—A number of apterous and alate females belonging to this species have been collected on the young shoots of the jak tree (*Artocarpus integrifolia*).

Locality.—Peradeniya.

Greenideoida ceyloniæ, nov. sp.—

Apterous viviparous female.—Examples of some measurements of the body :—

Length of body	.. 2.50 mm.	Length of siphunculi 2.16mm.	
Breadth of body	.. 0.72 mm.		Length of cauda .. —
Length of antennæ	.. 2.70 mm.		

Colour.—Body pinkish-white (from notes by Mr. Rutherford on the living insect).

Morphological Characters.—Body elongate, slightly arched, nearly naked, except the margins of the body, which bear a few very short, slightly capitate hairs.

Antennæ about as long as the body, seven-jointed (the processus terminalis considered as a true joint); relative lengths of the last five joints about as 60, 23, 25, 18, 32. Primary sensoriæ apparently without hair fringe.

Rostrum slender, reaching to the third coxæ.

Siphunculi very long, not much shorter than the body, nearly cylindrical, with rather short hairs. Cauda nearly obsolete, obtuse. Rudimentary gonapophysæ 3, often indistinct.

Legs normally built, with a few short hairs.

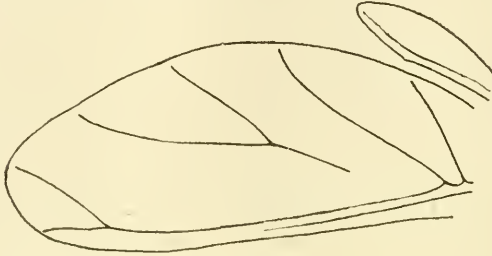


FIG. 2.—*Greenideoida ceylonæ*, n. sp.

FORE AND HIND WINGS OF ALATE FEMALE.

Alate viviparous female.—Examples of some measurements :

Length of body	2·35 mm.		Length of siphunculi	2·70 mm.	
Breadth of body	0·72 mm.			Expansion of wings	7·90 mm.
Length of antennæ	—				Length of cauda

Colour.—Body brownish-black ; the sides of meso and meta-thorax, the base and the apex of the abdomen yellowish-brown. Venter yellowish-brown. Eyes crimson. Antennæ black. Legs dusky white. Cornicles black. Pterostigma of fore wings black.

(Notes on living insects by Mr. Rutherford.)

Morphological Characters.—Body elongate, nearly naked. Antennæ broken off in the specimens examined ; the third joint bears about 23 fairly large sensoria. The antennæ are placed on very small frontal tubercles.

Rostrum, siphunculi, and cauda as in the wingless form.

Wings hyaline, the fore wings with the pterostigma very long, extending to near the tip of the wing ; *sector radii* short and nearly straight, the *media I.* only once forked, the *media II.* somewhat curved. Hind wings very small, with only a single longitudinal vein. Hooking hairs 2 in number.

(Description from two specimens.)

Life History.—This interesting species was discovered by Mr. Rutherford on May 11, 1914, feeding on the young foliage of *Mesua ferrea*. Only a few winged individuals could be collected at that time.

The species is preyed on by *Syrphid* larvæ and parasitized by an *Aphidius*, spec.; the parasitized insects are black in colour and somewhat circular.

Locality.—Peradeniya.

Shivaphis celti, Das.—A number of winged females and a few wingless ones were observed by Mr. Rutherford on the under surface of leaves of *Celtis cinnamomea*. The insects are very conspicuous owing to their white waxy coating and the large amount of a yellowish liquid (honey-dew) which they secrete. The same species has been found by Mr. B. Das in the neighbourhood of Lahore (British India).

Locality.—Peradeniya.

Oregma insularis, v.d.G.—Of this species a number of wingless individuals were collected on the under surface of leaves of bamboo (*Dendrocalamus strictus*). The colonies were attended by *Ecophylla smaragdina*, the red ant. The same species is fairly common on bamboos in Java.

Locality.—Peradeniya.

Oregma minuta, v.d.G.—Some alate and apterous females of this species were observed on the under surface of leaves of *Dendrocalamus strictus*, where they were attended by small blackish ants (*Cremastogaster*, sp.).

Locality.—Peradeniya.

Cerataphis lataneæ, Boisd.—A large number of apterous females were found on the inflorescences of an *Areca* palm.

Locality.—Peradeniya.